

in response to each rejection. The Examiner kindly indicated that he would carefully consider Applicants' remarks upon receipt of a response to the final rejection.

**Rejection Under 35 U.S.C. § 112, Second Paragraph**

The rejection of claims 9 and 11-15 as being indefinite under 35 U.S.C. § 112, second paragraph is respectfully traversed.

The Examiner indicates that claim 11 is indefinite for "the bacteria used for the lactic acid fermentation is obtained from sour leaven". Specifically, the Examiner indicates that it is unclear whether a natural starter as found in sour leaven is involved or pure cultures of yeast and bacterial flora of sour leaven are employed.

During the interview, Applicants asserted that it would be evident to one skilled in the art that "the bacteria obtained from sour leaven" includes both "pure culture" and "natural starter". The Examiner asserted that it is unclear what Applicants intend to cover, as the terms involving the phrase "obtained from" (in claims 9 and 11) are very broad. However, Applicants asserted that the breadth of a claim limitation should not form the basis for an indefiniteness rejection. (Please see MPEP 2173.04, which states, "Breadth of a claim is not to be equated with indefiniteness. *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971).") Accordingly, the breadth of the limitation should not form the basis for an indefiniteness rejection.

Further, Applicants also argued that the meaning of the terms is clear, as one skilled in the art would clearly understand the meaning of the phrases "yeast which is obtained from sour leaven" (claim 9) and "lactic acid bacteria [ ] obtained from sour leaven" (claim 11), when considered together with the knowledge in the art, and the teachings on pages 13-15 of the specification, which discuss the yeast and lactic acid bacteria obtained from sour leaven. MPEP 2173.02 states, "[t]he essential inquiry pertaining to [the definiteness] requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made." Thus, in view of the knowledge in the art, as well as the teachings clearly set forth in Applicants' specification, it is respectfully

asserted that Applicants' claims are definite in their present form. Accordingly, it is respectfully requested that the rejection be withdrawn.

The Examiner kindly indicated that he would reconsider his position after reviewing Applicants' remarks. The Examiner is respectfully requested to contact Applicants' representative to discuss the above-rejection, if there are remaining issues to be addressed prior to allowance.

**Rejections Under 35 U.S.C. § 103(a)**

Claims 9 and 11-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over a machine translation of JP 11-253095 (hereafter "R1") in view of Kato et al. (U.S. Patent No. 5,972,394, hereafter "R2"). Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over R1 in view of R2 as applied to claim 9, further in view of Ishigaki et al. (U.S. Patent No. 6,183,787, hereafter "R3").

Each of these rejections is respectfully traversed.

On page 7, paragraph 2a of the outstanding Office Action, the Examiner asserts that "[t]he addition of soybean milk to a dough for preparing a baked product is disclosed by R1 which is done for improving organoleptic as well as nutritional and functional purposes" and "R2 discloses that fermented soymilk has improved flavor as well as the sterilization of the fermented product to stop fermentation which incidentally is a limitation in claim 9 which in turn was added as an amendment by Applicants, therefore, the fermented product of R2 can be substituted for the soymilk of R1." However, Applicants respectfully disagree with this assertion of the Examiner, in particular, Applicants wonder why the Examiner asserts that the *fermented product of R2* can be substituted for the *soymilk of R1*, as soybean milk and fermented soybean milk are quite different products.

For example, please consider the situation using milk. When soybean milk corresponds to milk, the fermented soybean milk of R2 corresponds to a drink yogurt produced by removing alcohol from alcoholic yogurt produced by fermenting milk with lactic acid bacteria and yeast. One skilled in the art would certainly recognize that the flavor of milk is quite different from that of a drink yogurt. Therefore, it is not common sense that the organoleptic property of bread is improved even if milk is replaced with a drink yogurt, merely because the organoleptic property

of bread may be improved by adding milk. Similar to this comparison, the flavor of the soybean milk of R1 is quite different from that of the fermented soybean milk of R2, and thus, the Examiner's assertion that the fermented product of R2 may simply be substituted for the soymilk of R1 is untenable.

The Examiner asserts "[t]he improved good flavor and taste of the fermented soybean product, as disclosed by R2, in comparison with the conventional soybean milk will motivate those of skill in the art to incorporate the fermented product into the bread formulation to bring about improved aroma and taste of the baked bread" (page 5, paragraph 14 of the Official Action). However, R2 is an invention to **improve the flavor of the *fermented* soybean milk**, not regular soybean milk. Applicants cannot understand why one skilled in the art would combine the invention of R1, i.e., adding the soybean milk to bread, and the invention of R2, i.e., improving the flavor of *fermented* soybean milk. Further, Applicants cannot understand why one skilled in the art would predict that adding fermented soybean milk would result in improved aroma and taste of the baked bread.

R2 states, "hitherto, it has been disclosed, for example, in JP-A-55 19023 and JP-A-59 227241, that a *lactic fermented soybean milk* is prepared by fermentation of a soybean milk with lactic acid bacteria, but that this product has a grassy smell, in other words, a bean smell, which presents a problem for a lactic fermented soybean milk beverage" (R2, column 1, lines 11- 16, emphasis added). Additionally, R2 describes that "the present invention provides a method of preparing a *fermented soybean milk* which eliminates the above mentioned inconveniences" (R2, column 2, lines 16-18, emphasis added).

Accordingly, it is clear that R2 is not an invention to improve the flavor of soybean milk, but rather **an invention to improve the flavor of *fermented* soybean milk**. Thus, the Examiner's rationale that one would use the fermented soybean product of R2 in the teachings of R1 to improve the quality of the bread is untenable, as R2 only teaches improving the flavor of **fermented** soybean milk, not improving the flavor of regular soybean milk. As discussed above, soybean milk and fermented soybean milk are quite different products, and thus, one skilled in the art would not combine R1 and R2.

During the interview, the Examiner argued that the "grassy flavor" mentioned in column 1 of R2 is found in soybean milk, and is not due to fermentation. [Applicants kindly note that

this assertion has not been supported by any evidence.] Accordingly, the Examiner argued that R2 does teach improving the flavor of soybean milk by fermentation. Further, the Examiner argued that it is inherent that fermentation improves the flavor of soybean milk, and thus, one would be motivated to replace soybean milk with fermented soybean milk.

Applicants respectfully disagree. In general, the purpose of fermenting soybean milk is to give a yogurt-like flavor. On the other hand, the fermented soybean of the present invention is for improving the fermented flavor of bread. This fermented flavor of bread is distinct from yogurt-like flavor. Thus, contrary to the Examiner's assertion, conventional fermented soybean cannot improve the original fermented flavor of bread, and adding a yogurt-like flavor is quite distinct from a fermented flavor of bread. (Please see page 4, lines 5-20 of the specification.)

Additionally, on page 4, item 10 of the Office Action, the Examiner states, "it is noted that lactic acid bacteria of sour leaven are known in the art of baking, it is obvious that the lactic acid bacteria for the mixed fermentation of soybean milk can be derived from sour leaven as presently claimed to mimic the flavor and aroma of sour dough bread". However, this position is based upon the improper combination of R1 and R2, as the lactic acid bacteria is found in R2, while the bread is found in R1. As discussed above, R2 is an invention to improve the flavor of the fermented soybean milk as a beverage. One skilled in the art would not have been motivated to use yeast and bacteria derived from sour leaven in order to improve the flavor of the **fermented soybean milk as a beverage**.

This position of the Examiner can only be based on hindsight, after reading the teachings of Applicants' disclosure. As stated by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, "the factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." (See *KSR International Co. v. Teleflex Inc.*, 237 S. Ct. 1727 (U.S. 2007), referring to *Graham v. John Deere Co. of Kansas City*, 86 S. Ct. 684, which warned against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "guard against slipping into the use of hindsight". Accordingly, the basis of the Examiner's rejection is inappropriate.

Thus, for the reasons provided above, the rejection of claims 9 and 11-14 based on the teachings of R1 and R2 is untenable, and it is respectfully requested that the rejection be withdrawn.

Furthermore, the teachings of R3 fail to remedy the deficiencies of R1 and R2.

In item 3a on page 8 of the Office Action, the Examiner states, “R3 discloses that a fermented soy protein can be used as bread quality improver as well as disclosing the proteolysis of soybean protein which has been claimed in claim 15. The disclosure by R3 is complementary to [the] disclosures of R1 and R2. It further motivates the use of fermented soy protein as a bread quality improver”.

However, Applicants respectfully assert that the disclosure of R3 teaches away from the present invention with respect to a soybean solid content. In particular, R3 describes that “it is preferred that the quality improver for producing bread as described above is used in such an amount that the component (i) is about **0.01 to about 0.2 part by weight**...per 100 parts by weight of the total cereal powder for producing bread” (R3, column 7, lines 48-52, emphasis added), and that “the quality improver for producing bread desirably contains **10 to 100 parts by weight of the lactic acid fermentation product** of soy bean as described above per 100 parts by weight of the component (i) on a dry basis” (R3, column 6, lines 37-40, emphasis added). Therefore, R3 discloses that an amount of the lactic acid fermentation product of soy bean is about **0.01-0.2%** by weight based on 100 parts by weight of the cereal flour. Further, a range of the amount of the lactic acid fermentation product of soy bean in which the effect is actually confirmed is only about **0.011-0.028%** by weight in the Examples of R3 (R3, Table 1 and Table 2).

Example 1:  $(0.12 \times 0.95^{\dagger} / 100 \times 1) / (70 + 30 + 0.92105^{\S}) \times 100 \doteq 0.011$ .

Example 2:  $(0.12 \times 0.95^{\dagger} / 100 \times 1) / (70 + 30 + 0.87105^{\S}) \times 100 \doteq 0.011$ .

Example 3:  $(0.3 \times 0.95^{\dagger} / 100 \times 1) / (70 + 30 + 0.9079^{\S}) \times 100 \doteq 0.028$ .

Example 4:  $(0.3 \times 0.95^{\dagger} / 100 \times 1) / (70 + 30 + 0.9069^{\S}) \times 100 \doteq 0.028$ .

†: Depends on 5% of water content (R3, table 1).

§: Wheat flower added to make 100 parts by weight (R3, table 1).

Further, as shown in the specification of the present application, **0.05-0.22% by weight of soybean solid content make unfavorable results while 0.35-3.5% by weight of soybean solid content make favorable results** (Table 3 of the specification). Thus, in the present invention, only unfavorable results are obtained by the additive amount disclosed in R3.

Accordingly, one skilled in the art would not predict the effect of the present invention, based upon the teachings of the cited references, in particular R3.

Additionally, Applicants note that reference R1, which the Examiner relies upon for the range of solid soybean content, does not employ fermented soybean product. In fact, the only reference relied upon by the Examiner which teaches fermented soybean product in the making of bread is R3, which as discussed above, teaches away from the solid soybean content required by Applicants' claims.

Thus, for the reasons provided above, it is clear that the teachings of R3 fail to remedy the deficiencies of R1 and R2. Thus, the present claims are patentable over the teachings of R1, R2 and R3, and it is respectfully requested that the rejection be withdrawn.

The Examiner kindly indicated that he would reconsider his position after reviewing Applicants' remarks. The Examiner is respectfully requested to contact Applicants' representative to discuss the above-rejection, if there are remaining issues to be addressed prior to allowance.

**Conclusion**

Therefore, in view of the foregoing remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

If, after reviewing this response, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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